

B1P1
Cont

wherein said channel formation region contains an element selected from group IV elements other than silicon, and
wherein said source region, said drain region and said channel formation region are arranged in parallel with a plane,
wherein said channel formation region comprises a plurality of crystals provided in said crystalline semiconductor, and
wherein said plurality of crystals are in parallel with said plane in parallel with which said source region, said drain region and said channel formation region are arranged.

4. A semiconductor device comprising:
a source region and a drain region;
a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;
wherein said channel formation region contains an element selected from group IV elements other than silicon, and
wherein said source region, said drain region and said channel formation region are arranged in parallel with a plane,
wherein said channel formation region comprises a plurality of crystals provided in said crystalline semiconductor,
wherein said plurality of crystals are in parallel with said plane in parallel with which said source region, said drain region and said channel formation region are arranged, and
wherein concentration of said element in said channel formation region is 5×10^{19} atoms/cm³ or less.

5. A semiconductor device comprising:
a source region and a drain region;
a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;
wherein said channel formation region contains an element selected from group IV elements other than silicon,

6. 01
Cont wherein said channel formation region comprises a plurality of crystals provided in said crystalline semiconductor and extending in a direction connecting said source region and said drain region, and

wherein concentration of said element in said channel formation region is 5×10^{19} atoms/cm³ or less.

6. A semiconductor device comprising:

a source region and a drain region;

a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;

wherein said channel formation region contains an element selected from group IV elements other than silicon,

wherein said channel formation region comprises a plurality of crystals provided in said crystalline semiconductor and extending in a same direction,

wherein an intersecting angle between said same direction and a direction connecting said source region and said drain region is adjusted in order to control resistance against movement of carriers in said channel formation region, and

wherein concentration of said element in said channel formation region is 5×10^{19} atoms/cm³ or less.

7. A semiconductor device comprising:

a source region and a drain region;

a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;

wherein said channel formation region contains an element selected from group IV elements other than silicon,

wherein said channel formation region comprises a plurality of crystals provided in said crystalline semiconductor and extending in a same direction,

wherein an intersecting angle between said same direction and a direction connecting said source region and said drain region is adjusted in order to control a rate at which carriers traverse grain boundaries in said channel formation region, and

B1
cont

121 | wherein concentration of said element in said channel formation region is 5×10^{19} atoms/cm³ or less.

8. A device according to claim 2 wherein said element is selected from the group consisting of Sn and Pb.

9. A device according to claim 2 wherein said semiconductor device is selected from the group consisting of an active matrix type display device and an image sensor.

10. A device according to claim 3 wherein said element is selected from the group consisting of Sn and Pb.

11. A device according to claim 3 wherein said semiconductor device is selected from the group consisting of an active matrix type display device and an image sensor.

12. A device according to claim 4 wherein said element is selected from the group consisting of Sn and Pb.

13. A device according to claim 4 wherein said concentration of said element is measured by Secondary Ion Mass Spectroscopy.

14. A device according to claim 4 wherein said semiconductor device is selected from the group consisting of an active matrix type display device and an image sensor.

15. A device according to claim 5 wherein said element is selected from the group consisting of Sn and Pb.

16. A device according to claim 5 wherein said concentration of said element is measured by Secondary Ion Mass Spectroscopy.

17. A device according to claim 5 wherein said semiconductor device is selected from the group consisting of an active matrix type display device and an image sensor.

B1
Cont

18. A device according to claim 6 wherein said element is selected from the group consisting of Sn and Pb.

19. A device according to claim 6 wherein said concentration of said element is measured by Secondary Ion Mass Spectroscopy.

20. A device according to claim 6 wherein said semiconductor device is selected from the group consisting of an active matrix type display device and an image sensor.

21. A device according to claim 7 wherein said element is selected from the group consisting of Sn and Pb.

22. A device according to claim 7 wherein said concentration of said element is measured by Secondary Ion Mass Spectroscopy.

23. A device according to claim 7 wherein said semiconductor device is selected from the group consisting of an active matrix type display device and an image sensor. --
